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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,698	01/18/2002	Seizo Suzuki	217784US2	3808

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ALEXANDRIA, VA 22314

EXAMINER
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ALLEN, DENISE S

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/047,698

Applicant(s)

SUZUKI, SEIZO

Examiner

Denise S Allen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 8-11, 19-35 and 43-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-18 and 36-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5-7, 9-11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: IDS PTO-1449 for paper 14.

**DETAILED ACTION*****Election/Restrictions***

Applicant's election with traverse of Species 1 (Claims 3 – 7, 14 – 18, and 38 – 42) in Paper No. 19 is acknowledged. The traversal is on the ground(s) that examining all of the species presented would not place serious burden on the examiner because all of the species can be search in a handful of sub-classes. This is not found persuasive because the distinct and mutually exclusive features designated for each of the species in the election requirement would require a separate search within the set of sub-classes pertinent to the application.

The requirement is still deemed proper and is therefore made FINAL.

Claims 8 – 11, 19 – 35, and 43 – 62 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 19.

***Information Disclosure Statement***

The Information Disclosure Statements filed on April 22, June 13, June 25, July 24, August 15, October 1, and November 18, 2003 (papers #13, 15, 16, 17, 20, 21, and 22) have been considered by the Examiner (noted here because they did not include PTO-1449 forms).

***Oath/Declaration***

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

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The oath or declaration is defective because:

It does not identify the foreign application for patent or inventor's certificate on which priority is claimed pursuant to 37 CFR 1.55, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month and year of its filing. The application number listed on the Declaration differs from the application number of the submitted priority papers and the application number referenced in the specification.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Figure 1A reference H. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 3, 12 – 14, and 36 – 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoki et al (JP 11-38348).

Regarding claims 1, 12, and 36, Aoki et al teaches a scanning image formation optical system (Figure 9 references 7' and 8) for use in an optical scanner (Figure 9) for scanning a scanned surface (reference 10) for one or more scanning lines by causing one or more coupled luminous fluxes from a light source (Figure 1 reference 1) to be incident on a deflecting

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reflective surface of a rotating optical deflector (reference 6), which rotates around a rotary axis of the optical deflector, said rotary axis being parallel to the deflecting reflective surface, diagonally deflecting the luminous fluxes relative to a surface perpendicular to the rotary axis of the optical deflector (Figure 1), and converging the deflected luminous fluxes toward the scanned surface by the scanning image formation optical system so as to form an optical spot on the scanned surface (Figure 9), the scanning image forming optical system comprising two or more special tilt surfaces (references 7 and 8), each said tilt surface formed such that a tilt amount of a sub-scanning cross-sectional configuration changes in a main scanning direction (Figures 3 and 10).

Regarding claims 2, 13, and 37, Aoki et al teaches the two or more special tilt surfaces are formed so as to correct a scanning line curvature and a wavefront aberration on the scanned surface (Figure 11).

Regarding claims 3, 14, and 38, Aoki et al teaches the scanning image formation optical system includes two or more optical elements (references 7 and 8), and wherein at least two of the two or more special tilt surfaces are formed on different optical elements of the two or more optical elements (on references 7 and 8).

Regarding claim 12, Aoki et al teaches a coupling device (references 2 and 5).

Regarding claim 36, Aoki et al teaches a photosensitive medium (reference 10).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 – 7, 15 – 18, and 39 – 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al.

Aoki et al teaches a scanning image forming optical system as described above. Aoki et al does not teach that one or more of the two or more optical elements is a lens, but rather that they are mirrors.

It would have been obvious to one of ordinary skill in the art at the time of the invention to replace one or more of the mirrors containing the special tilt surfaces of Aoki et al with lenses containing special tilt surfaces in order to reduce the vertical dimension of the optical scanner by eliminating the folding of the optical path.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise S Allen whose telephone number is (703) 305-7407. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A Dunn can be reached on (703) 305-0024. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

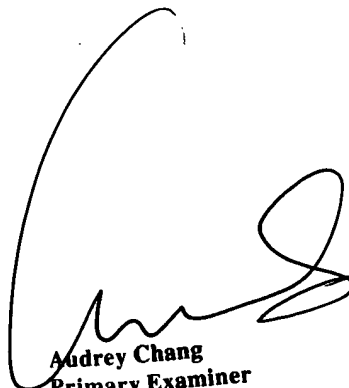
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

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Please note that due to the organization where this application or proceeding is assigned relocating to the new USPTO offices in Alexandria, VA, the following new telephone numbers will be effective on January 21, 2004: Denise S. Allen (571) 272-2305 and Drew Dunn (571) 272-2312.

Denise S Allen  
Examiner  
Art Unit 2872

  
dsa

  
Audrey Chang  
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